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A Graduate Course on Teaching and Learning in Higher Education: Influences on Conceptions of Teaching and Learning

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A Graduate Course on Teaching and Learning in Higher Education: Influences on Conceptions of Teaching and Learning

Abstract

This paper reports on the effects of a graduate course on teaching and learning on graduate teaching assistants' conceptions of teaching and on the teaching philosophy statements that arose from those conceptions. Effects are interpreted from three perspectives: 1) course facilitators' reports of their perceptions of course participants' conceptual change; 2) an independent assessors' ratings of the evidence of change through blind review of course participants' initial philosophy statements and final statements; and 3) participants' own perceptions of change and identification of the course components and learning activities that were most significant in their conceptual development. Findings suggest that graduate teaching assistants' perceptions of conceptual change differ significantly from those of both the course facilitators and the independent assessor.

Cet article présente un rapport concernant les effets d'un cours supérieur portant sur l'enseignement et l'apprentissage sur les conceptions relatives à l'enseignement d'assistants d'enseignement diplômés et sur les exposés sur la philosophie d'enseignement qui ont découlé de ces conceptions. Les effets sont interprétés à partir de trois perspectives : 1) les rapports des facilitateurs du cours concernant leurs perceptions du changement conceptuel survenu parmi les participants; 2) l'évaluation d'un assesseur indépendant concernant l'évidence du changement par le biais d'un examen aveugle des exposés initiaux sur la philosophie d'enseignement des participants ainsi que de leurs exposés finaux; et 3) les perceptions personnelles des participants concernant le changement et l'identification des composantes du cours et des activités d'apprentissage qui ont été les plus significatives pour leur développement conceptuel. Les résultats suggèrent que les perceptions des assistants d'enseignement diplômés concernant le changement conceptuel diffèrent grandement de celles des facilitateurs du cours et de celles de l'assesseur indépendant.

Keywords

graduate course, teaching philosophy, change

Dedicated courses, or programs for new faculty members, teaching fellows, or graduate teaching assistants on teaching and learning in higher education are becoming increasingly common at North American institutions (Schönwetter, Ellis, Taylor, & Koop, 2008). While course outcomes and expectations may not be as widely formalized in Canada and the United States as they have become in the UK (Hunt, Wright, & Gordon, 2008) they are generally based on the common goals for the development of professional teaching identified by Gibbs and Coffey (2000): (a) the development of conceptions of teaching and learning, and (b) the improvement of teaching skills.

Covering a variety of instructional issues and topics, the course on which we are reporting, like many others offered at Canadian universities, is intended to develop participants' conceptions of teaching and learning and at the same time help participants develop the necessary practical teaching skills through which to actualize increasingly sophisticated conceptions. In fact, much of the focus in these courses for graduate teaching assistants is explicitly oriented towards helping participants develop their own conceptions of teaching and learning.

Conceptions of teaching and learning are idiosyncratic (e.g., Biggs, 1999; Entwistle, Skinner, Entwistle, & Orr, 2000), largely unarticulated composites of assumptions, values and beliefs about what it means to teach and to learn. Conceptions of teaching and learning are, in a very real sense, personal theories (Ramsden, 1992) derived of experience. Those personal theories, in turn, have a powerful influence on an individual's approach to teaching (e.g., Kember, 1997; Pratt, 1992; Samuelowicz & Bain, 1992, 2002). Of particular significance to educational developers is the evidence that changes in teaching are unlikely to occur or have lasting positive impact unless a teacher's conceptions of teaching also change (e.g., Åkerlind, 2004; Ho, Watkins, & Kelly, 2001), hence the importance of the tandem goal orientation of the programs.

As educational developers, we investigate how we might best help novice teachers, especially teaching fellows and graduate teaching assistants, develop their conceptions of, and approaches to, teaching. A common strategy in concept development in Canadian contexts is to encourage course participants to articulate a statement of teaching philosophy, which is defined as "a systematic and critical rationale that focuses on the important components of effective teaching and learning in a particular discipline and/or institutional context" (Schönwetter, Sokal, Friesen, & Taylor, 2002. p. 84). Articulating such a statement requires that the writer confront the assumptions, values, and beliefs that shape his or her approaches to teaching, as well as the assumptions they hold of the nature of learning. Subsequently, statements of teaching philosophy become the cornerstones of each individual course participant's teaching dossier (the portfolio that documents teaching experience and effectiveness as well as ongoing professional development).

There is ample evidence in the literature to suggest that dedicated courses and programs in teaching and learning in higher education are generally well received by the participants who undertake them. Many studies report a positive effect in influencing change in conceptions of teaching and learning (Ho, Watkins, & Kelly, 2001; Quinn, 2003) and even some that report positive influences on participants' subsequent approaches to learning (Gibbs & Coffey, 2004). These changes, however, are often reported only from the researchers' points of view and do not often consider the course participants' perspectives. In the instances when participants' own perspectives are included, they are usually considered in terms of the ways in which participants have used development opportunities in their teaching practice (Åkerlind, 2005).

Investigations of changes in conceptions of teaching and learning are often reported through results obtained through the use of inventories and questionnaires such as the Approaches to Teaching Inventory (ATI) (Trigwell & Prosser, 2004), the Course Experience Questionnaire (Ramsden, 1991) or the Teaching Method Inventory (Coffey & Gibbs, 2002). Measures of changes in conceptions of teaching and learning reflect the extent to which individuals report themselves as being teacher-focused or learner-focused in their approach to teaching. While it is possible for individuals to score highly on both the teacher-focused and student-focused scales at the same time (Gibbs & Coffey, 2004), the ATI is still regarded as a valid and reliable relational instrument and is recommended as a time-efficient alternative to interviewing (Trigwell & Prosser, 2004).

Often it is Samuelowicz and Bains' (1992, 2001) or Kember's (1997) categories of teaching conceptions that are used as frameworks for investigations of conceptual change. While those frameworks provide a plausible starting point for discussions of the variations in held conceptions of teaching and learning, the use of only those pre-set categories may have the unintended effect of imposing artificial limits on the possible range of existing conceptions which may eventually have the effect of squeezing outliers into categories of best fit. The research, and its results, adequately legitimize the existence of educational development programs by demonstrating correlations between participation in development programs and positive changes in conceptions, practice and sometimes even in students' subsequent approaches to learning. But, in omitting the course participants' own perspectives on change, the research does little to help our understanding of why it is that development programs work or of how to make them more effective. Much of the current and recent research on teacher change related to educational development is not bringing us any closer to understanding what it is that we as educational developers are doing, or need to do, to help teachers change.

A lesser used approach in the investigation of conceptual change as an effect of professional development is through narrative accounts which tend to contextualize and provide personal iterations and important elements that may be missed by selected-response inventories. Narrative accounts may better capture the nuances of change, the factors influencing it and individuals' reactions to the changes they have undergone.

More recent literature implies that regular discourse on teaching and exposure to alternative conceptions of teaching are effective means of fostering the development of increasingly sophisticated conceptions of teaching and learning, (e.g., Norton, Richardson, Hartley, Newstead, & Mayes, 2005). Opportunities for discourse on teaching and sharing of perspectives and conceptions of teaching and learning were integral components of the course on which we are reporting here as was some of the more normative, "best practice" coaching. Our purpose in conducting this investigation was to explore the change, if any, in conceptions of teaching and learning that participation in the course engendered, and to invite course participants to articulate those changes and identify course elements that were most significant in bringing the changes they identified.

Methods

The purpose of this study was to investigate changes in graduate teaching assistants' conceptions of teaching and learning and changes in the teaching philosophy statements that arose from those conceptions as a result of participation in a graduate course on teaching and learning. In addition, the study aimed to improve our understanding of the influence of individual course components on participants' conceptions of teaching and learning, and to

investigate the degree to which those changes were evident in the evolution of participants' teaching philosophy statements. To do this, we invited the graduate teaching assistants who enrolled in a graduate course on teaching and learning to participate in the study.

This term-length, for credit course is offered annually through the Centre for Teaching and Learning at Queens's University, a medium-sized, research-intensive, Canadian university. Enrollment in the course is typically capped at 22 participants. The university's General Research Ethics Board granted ethics clearance for the study.

Course Description

While the course has evolved through several iterations, course components have been largely centered on the following topics:

- Principles of effective teaching
- Knowing your students
- Understanding learning; styles and taxonomies
- Instructional strategies and session planning/Discussion strategies/Active learning
- Micro-teaching; Guest Teaching; Guest Teaching Observation
- Assessment strategies
- Professionalism/ethics in teaching
- Teaching Dossier preparation
- Peer observation of teaching
- Syllabus/course planning
- Panel discussion with faculty members

This course was intended to:

1. Relate formal and theoretical knowledge of teaching and learning to the post-secondary environment;
2. Place emphasis on learning and how to foster it;
3. Emphasize active participation in learning with a focus on collaboration and resource- and experience-sharing
4. Provide opportunities for participants to experiment with the teaching practices modeled by the course facilitators; and
5. Support graduate teaching assistants in developing and establishing approaches to teaching that are congruent with their values and skill sets and that are also representative of currently acceptable teaching practices.

The course was designed to help students develop a better understanding of learning and a personal commitment to teaching. Classes were largely activity-based with an emphasis on collaboration, self-direction, and participation. Course participants experienced, and experimented with a range of teaching methods, and used self- and peer-assessment techniques to monitor progress. A significant focus of the course was the development of a teaching philosophy statement through which participants were asked to articulate the assumptions, values and beliefs that informed their practice. That philosophy statement became an integral part of the teaching portfolio they were required to assemble, the purpose of which was to document their

teaching experience and effectiveness, as well as their ongoing professional development as teachers.

Participants

At the outset of the course, participants gave informed consent to be participants in the study. As all sources of data collected for this study were components that were regularly required for successful completion of the course, no supplemental work was required of any of the participants. The identity of those who chose to participate in the study was blinded to course instructors until completion of the course and analysis of all sources of data.

Graduate teaching assistants from across the university's campus participated in the course, with Masters and PhD student representatives from Applied Science, Arts and Science (including Languages), Education, Health Science and Law. Of the 17 people enrolled in the course, 13 consented to participate in the study.

Approach

In order to investigate the role of the graduate course in developing and changing conceptions of teaching three questions guided this research:

1. Have conceptions of teaching and learning changed as a result of this course?
2. Has the teaching philosophy statement changed as a result of this course? If so, in what way?
3. What course components were most instrumental in bringing about change?

In order to answer these questions data were collected from a variety of sources and from three different perspectives (Table 1).

Table 1

Data Sources for the Three Research Questions

Question	Perspective	Data Source
1. Have conceptions of teaching and learning changed?	Participant	Exit interview
	Instructors	Teaching philosophy statement meeting Exit interview Line-up discussion Reading the writing on the wall
	Independent Assessor	Contrast initial and final teaching philosophy statements
2. Have teaching philosophy statements changed? In what way?	Participant	Exit interview
	Independent Assessor	Contrast initial and final teaching philosophy statements
3. What course components were most instrumental in bringing about change?	Participant	Exit interview
		Reading the writing on the wall
		Exit survey

Data Sources

Line-up. As part of an ice-breaker activity in the first class, participants were asked to demonstrate the level of their agreement to the statement “Effective teaching is the transmission of new knowledge from an expert to a learner so that the learner masters content and skills” by staking a position along an imaginary Likert scale on the classroom floor. During the ensuing debriefing, students discussed their rationales for the stances taken while instructors noted both individual and general responses. This same activity was repeated in the last class of the course. Once again, following their ratings, instructors noted students’ rationales for the stances taken and noted all discussion points. Initial ratings, rationales and discussion points were contrasted with the later results.

Teaching philosophy meeting. This individual meeting between one of the two course instructors and individual students took place between the third and fourth week of the 12-week course. The purpose of the meeting was to discuss each student’s initial draft teaching philosophy statement. The meetings were unstructured, and focused on helping the student to understand and clarify, for themselves, their own conception of teaching and learning. The

instructor's perception of the initial philosophy statement and the resulting discussion were documented following each meeting.

Reading the writing on the wall. As part of adjourning activities on the last day of the course, participants were asked to complete sentence stems that had been posted on chart paper around the room. The intention was for students to be able to make comments in such a way as to safeguard their identity while at the same time enabling others to build on, reject or supplement the originally contributed statement. The four sentence stems were:

1. An important thing I learned about myself as a teacher is...
2. For me, one great moment in this course was when...because...
3. An aspect of teaching that I'd like to develop further or learn more about is...
4. One thing that still has me perplexed is...

Exit survey. In an end-of-course evaluation, all course participants were asked to rate the usefulness of course components and resources in developing their conceptions of teaching and their teaching philosophy. They were invited to use a scale from one (not at all useful) to five (extremely useful). Means for each of the components were computed and comments compiled to give an indication of the relative utility of course components.

Exit interview. Conducted at the conclusion of the course, individual exit interviews provided course participants with an opportunity to engage in a private hour-long discussion with one of the course instructors. The meeting was semi-structured and, while the four questions below were a featured component of each meeting, participant-generated topics were also solicited and pursued. Course participants were encouraged to discuss any course- or development-related issue and their experience of it. Notes taken during and after each meeting were compiled and analyzed for trends and themes.

1. How have your conceptions of teaching changed, if at all, as a result of the course?
2. What factors were instrumental in bringing about change?
3. How well have your understanding and conceptions of teaching and learning been made apparent in your teaching philosophy statement?
4. How has your teaching philosophy statement changed from the initial to the last version?

Contrasting initial and final teaching philosophy statements. A knowledgeable and experienced educational developer skilled in providing feedback on teaching philosophy statements was recruited to act as an independent assessor of the participants' initial (submitted after the first week of class) and final (submitted on the last day of class) teaching philosophy statements. Using the criteria suggested by Schönwetter et al. (2002) on the components of a philosophy statement, the independent assessor was asked to contrast the initial and final philosophy statements and rate the degree of change using a visual analogue scale, from no overall change to great change.

Results

Results from the participants', the instructors' and the independent assessor's perspectives, are reported in Table 2.

Table 2
Outcomes for Research Questions

Question	Perspective	Outcome
1. Have conceptions of teaching and learning changed?	Participant	No - conceptions have not changed
	Instructors	Yes - in depth, clarity and understanding
	Independent Assessor	No - only three were rated at, or beyond, the mid-point of the visual analogue scale for overall change
2. Have teaching philosophy statements changed? In what way?	Participant	Yes - in structure and organization - evidence to support ideas - more meaningful to me - more conviction about my ideas
	Independent Assessor	Yes - eleven of thirteen statements showed change - six showed significant change - only two showed no change - most change → organization/structure and examples
3. What course components were not instrumental in bringing about change?	Participant	Focus on student learning
		- Kolb learning inventory
		- Taxonomies of learning
		Writing a philosophy statement
		Community
		- Discussion with peers
		- Exposure to and debate about alternatives
		Establishing a development relationship
		Readings → least instrumental

Summary of Findings

Question 1: Have conceptions of teaching and learning changed as a result of this course?

Although the instructors reported that the participants' conceptions of teaching and learning had changed, the participants themselves and the independent assessor indicated that they had not. What the participants did report was a perception that, as a result of taking the course, they had more clarity and understanding of their already existing, but previously tacit, conceptions of teaching and learning.

Question 2: Has the teaching philosophy statement changed as a result of this course? If so, in what way? The participants and the independent assessor indicated that the philosophy statements had changed over the term. The change was in organization, structure and illustrative examples of how philosophies were enacted but not in terms of the conceptions of teaching and learning that were in evidence (see Table 3 for the independent assessor's rating of change)

Table 3

Independent Assessors Ratings of Change Using the Criteria of Schönwetter et al. (2002)

	Average change score (out of 7)	Number of participants who showed significant change ($>3.5/7$)	Number of participants who showed no change
Overall	2.80	6	2
Beliefs about Teaching	1.69	3	6
Beliefs about Learning	1.60	3	7
View of the Learner	0.92	1	8
Student-Teacher Relationship	1.23	2	8
Methods of Teaching	1.47	2	7
Methods of Assessment	1.09	1	6
Personal Context	1.00	2	11
Examples	2.28	6	6
Organization and Structure	2.60	6	4

Question 3: What course components were most instrumental in bringing about change? Combined results from three data sources indicated that the most influential components of the course were: the requirement to write a philosophy statement; having the opportunity to establish a development relationship with an educational developer; the consistent focus on student learning; and the sense of learning community within the classroom (see Table 4 for participants' rating of usefulness of individual course components).

Table 4

Rating of Usefulness of Course Components for Development of Conceptions of Teaching and Teaching Philosophy Statements

Course Component	Mean (out of 5)
Readings	3.5
Writing a philosophy statement	4.7
Peer discussion triads	3.8
Philosophy statement rubric	3.9
Microteaching assignment	3.8
Class discussions	4.3
Meeting with the course instructor	4.7
Manual on preparing a teaching dossier	4.3
Peer teaching observation	4.3
Letter of feedback on a peer's teaching	3.8
Panel discussion with faculty members	4.3
Preparing a course syllabus	3.9
Learning styles inventory	4.3
Taxonomies of learning	4.3

Discussion

There is a growing understanding of the importance of courses on teaching and learning for the development of new faculty members, teaching fellows and graduate teaching assistants. Although in most cases the content of these courses is not formalized or mandated, there is, to some extent, agreement of the goals, objectives, and course content (Schönwetter et al, 2008). Despite the commonality of these courses, there is limited research on the extent to which these courses help the participants develop. The most common empirical evidence that is collected and reported is ratings of satisfaction at course completion. The usefulness of these scores is limited and does not address the need to understand the impact of these courses on participants' development as teachers. The design of the methodology for this study was informed by the criticisms in the literature that these studies are often from only one perspective and that there is need for inquiry into impact on learning as well ratings of participant satisfaction.

When participants in the course were asked if their conceptions of teaching and learning had changed from entry into the course to post-completion of the course they clearly indicated that they had not. In response to the final activities of the course, and in the exit interviews participants articulated a new awareness, greater clarity and conviction, confidence and the ability to talk about and demonstrate their conception of teaching and learning but no change in underlying conceptions. For example, one participant stated in response to the line-up in the final class "I'm standing in the same spot but now I know *why* I'm standing here". It appeared that the greatest changes were in the participants' level of awareness of conceptual possibilities, level of awareness of their own value sets, an improved ability to make the tacit explicit – to articulate conceptions. As a result, participants stated with conviction that they had become more purposeful in their approaches to teaching despite reporting that their approaches to teaching,

aside from that increased purposefulness, had not changed. It seemed that, to these participants, evidence of behavioural change was necessary for them to concede conceptual change. In contrast, both instructors interpreted the increased clarity, conviction, ability to articulate and theoretical awareness as conceptual change.

Interestingly, conceptual development as expressed by the participants was not regarded as change. More accurately, what the instructors interpreted as *change*, the participants perceived as growth, evolution or as revelation of their implicit but under-recognized and previously poorly-articulated value set. The distinction between these two perspectives is important to note as it can indicate the bias that instructors may have when looking for and evaluating the impact of their own courses. It also indicates the differences in the understanding of the term “change” in the context of improving and developing as a teacher.

Participants’ perspective that change did not occur was corroborated by an independent assessor who compared initial (written after the first class) and final (written at course completion) teaching philosophy statements. The independent assessor found that, while the majority of philosophy statements did change to a varying degree (with only two showing no change), overall, the conceptions of teaching and learning expressed in them did not. Like the views expressed by the participants, the change that did occur in the teaching philosophy statements as a result of participation in the course was in clarity, organization, structure and the use of examples to support statements (6 out of the 13 showed great change on these elements).

The use of teaching philosophy statements as a representation of conception of teaching and learning seems reasonable. Furthermore, and perhaps more importantly, the participants in the class regarded the exercise of developing a teaching philosophy statement as a very important and influential component of the course. The ability of an independent assessor, who was an educational developer experienced in reading teaching philosophy statements, to accurately evaluate change from an initial to a final philosophy statement on set criteria is uncertain. The criteria chosen from Schönwetter et al. (2002) were useful for reading the teaching philosophy statements and seemed reasonable to apply when evaluating change in these statements. Despite the fact the independent assessor was not evaluating the quality of the teaching philosophy, the perspective of an independent assessor on a pre-course participation to a post-course participation outcome is potentially valuable empirical evidence of the impact of courses of this type.

With the increased reliance on courses of this nature to acclimate graduate teaching assistants and new faculty to their roles as teachers it is important that we improve our understanding of their efficacy from the participants’ perspectives. The questions we asked for the purposes of this study were not those typically found on our institution’s course evaluation forms. Our interest was not on the generalities of student satisfaction with the overall rating of the course but on the specific elements of the course that contributed to students’ learning. Comments and ratings suggested that the most influential aspects of the course for developing conceptions of teaching and learning were writing a teaching philosophy statement and having the opportunity to establish a development relationship with the instructors. In addition, participants indicated that the focus on student learning and the sense of community in the classroom, where discussion and exposure to alternative views was highly valued, were also decidedly influential. Notably, participants indicated that the course readings were least instrumental in developing their conceptions of teaching and learning. The open-ended nature of our questioning meant that we were able to gain insight into participants’ perceptions of the critical elements of the course. This does not necessarily mean that other aspects of the course

were not useful in some way to the participants' development as teachers. These findings do indicate the importance of having graduate teaching assistants think about and articulate what their conceptions of teaching and learning are, in addition to providing an opportunity to discuss these ideas with others.

(Mis)Perceptions of Conceptual Change

The graduate teaching assistants who participated in this course clearly and unequivocally stated their beliefs that the course had been worthwhile. Most reported an increase in self-confidence, an improved awareness of and ability to articulate their belief about teaching and learning, and a broader repertoire of instructional methods. Yet, they consistently reported that their conceptions of teaching – those idiosyncratic composites of assumptions, beliefs and knowledge that are so fluidly affected by experience – had not changed. What had changed was the participants' ability to name and frame their experiences and assumptions, something that Mezirow (2000) identified as an essential step in the process of conceptual change and transformative learning. As facilitators of the course, we were vigilant in seeking evidence that the course was having a positive impact on participants' conceptions and skills. When we discerned differences in the ways that the graduate teaching assistants became able to engage in discourse about teaching as the course progressed we interpreted their improved facility and conviction as evidence of conceptual change. Participants interpreted that same evidence as their improved ability to apply their newly acquired vocabulary to their previously unplumbed, though latently existing, conceptions of teaching and learning. The change seemed to be from a state of relative theoretical imprecision (diSessa & Sherin, 1998) to one of greater maturity and clarity. While we were eager to see and name "change", what we instead witnessed was emergence and growth.

Implications for Course Design

While participants were easily and willingly able to identify the components of the course they found most educative, they were adamant that their conceptions of teaching and learning had not changed. They were, however, willing to concede that their conceptions had evolved, become more evident and easier to articulate. Rather than experiencing a change, their exposure to and engagement in the discourse of teaching, enabled participants to adopt a *change orientation* (Richardson, 1998) that enabled them to become explorative and reflective about their own conceptions and practice and more open to those of others. Providing the supportive environment and opportunity for course participants to (a) explore their conceptions of teaching through writing a philosophy statement, and (b) engage in open discourse about learning focused teaching with instructors and other participants enables conceptions to emerge and to evolve. In doing so, courses on teaching and learning in higher education can provide the academic vocabulary necessary for clear articulation of those conceptions.

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